REMARKS

This application has been reviewed in light of the Office Action dated May 20, 2008. Claims 16, 24-31, and 37 are presented for examination, of which Claims 16 and 37 are in independent form. Claims 17-24, 32-36, and 38-46 have been cancelled, without prejudice or disclaimer of the subject matter presented therein. Claims 16, 25-27, 29, 30, 31, and 37 have been amended to define Applicants' invention more clearly. Favorable reconsideration is requested.

The Office Action objected to the specification as failing to provide proper antecedent basis for Claim 16, objected to Claim 16 under 35 U.S.C. § 132(a) as introducing new matter into the disclosure; and objected to Claim 28 under 37 C.F.R. § 1.75(c) as being of improper dependent form. Applicants have carefully reviewed and amended Claims 16 and 27 and as deemed necessary to ensure that the specification and claims conform fully to the requirements of 37 C.F.R. § 1.175(d)(1), MPEP § 608.01(o) and 35 U.S.C § 132(a) with special attention to the points raised on pages 2 and 3 of the Office Action. It is believed that these objections have been obviated, and their withdrawal is therefore respectfully requested.

Claims 16, 24-31 and 37 were rejected under 35 U.S.C. § 112, first paragraph, for lack of best mode and enabling disclosure. Particularly, on page 4 of the Office Action it states,

> Nowhere in the specification does the Applicant provide concrete examples for any of the functions X(x), Y(y), f(x,y) or $\tilde{f}$(x,y). Since there are an arbitrary number of functions over a coordinates (x, y) and since the Applicant has only presented the functions in purely abstract form or defined by other functions that are purely in abstract [form], the Applicant has not fulfilled the Best mode requirement by providing at least one concrete function that can fulfill the requirements of a best mode of operation.
>
> Furthermore; convergence is a relative term and nowhere in the Application does the Applicant present any value to which E converges, hence; here is no best mode in the specification for convergence.

Similarly, with respect to enablement, on page 4 of the Office Action it states that

> Since there are an infinite number of functions over coordinates (x,y) it is highly unlikely that one of ordinary skill in the art at the time the inventions [were] made could come up with functions **without recourse to undue experimentation** to provide a high-efficiency data coding technique as recited on page 3 of the Applicant's specification...

Applicants respectfully traverse these rejections. Initially, Applicants note that an adaptive base as recited in the claims is an array variable --not a function. Moreover, the specification contains several concrete examples implementing the adaptive bases. *See, e.g.*, Figs. 10-23 and related text. In addition, an exemplary "value to which E converges" may be found in paragraph [0085] of the published application.[1] Applicants also submit that regardless of whether the specification includes concrete examples, such specific examples are not required to show best mode. *See, e.g.*, MPEP 2165.01. Nevertheless, without conceding the propriety of rejections under Section 112, paragraph 1, Claims 16 and 37 have been amended to clarify that an "adaptive base" is comprised of two one-dimensional array variables X(m) and Y(n) and that the converged error is tested against "a predetermined admissible error", in accordance with the specification. It is believed that the rejections under Section 112, paragraph 1 have been obviated, and their withdrawal is therefore respectfully requested.

Claims 16, 24-31 and 37 were rejected under 35 U.S.C. § 112, second paragraph, as being incomplete. Although it is not conceded that the rejection is correct or valid, Claims 16 and 37 have been amended in an effort to expedite the allowance of this application with special attention to the points raised on pages 4-6 of the Office Action. Applicants respectfully submit

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[1/] It will be understood that the scope of the Claims of the present application are not limited to the values or details of this embodiment, which are referred to purely by way of example.

that amended Claims 16 and 37 and the claims dependent thereon, when read (as the law requires that they be read) in light of the specification, are sufficiently clear such that one of ordinary skill in the relevant art would understand with the legally-required degree of certainty the scope of these claims. It is believed that the rejections under Section 112, second paragraph, have been obviated, and their withdrawal is therefore respectfully requested.

Claims 16, 24-31 and 37 were rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter. Although it is not conceded that the rejection is correct or valid, Claims 16 and 37 have been amended as deemed necessary to ensure that those claims and the dependent claims thereon conform fully to the requirements of 35 U.S.C. § 101 with special attention to the points raised on pages 6 and 7 of the Office Action. It is believed that this rejection has been obviated, and its withdrawal is therefore respectfully requested.

The Office Action rejected Claims 16, 24-27, 30, 31 and 37 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,519,545 (*Amano*).

Claim 16 is directed to a method for encoding two-dimensional data f(m, n), such as an image having m x n elements (*e.g.*, pixels), into adaptive bases including two one-dimensional array variables: X(m) storing m data, and Y(n) storing n data. In a first stage, the two one-dimensional variables $X_1()$ and $Y_1()$ are initialized with random values and then two-dimensional data f'(m, n) is reconstructed using the two one-dimensional array variables $X_1()$ and $Y_1()$ to calculate an error between the original image represented by the f(m,n) data and the reconstructed image represented by the f'(m,n) data. Until the error has converged, the correction of the variables $X_1()$ and $Y_1()$ are repeatedly performed.

If the error has converged and the error is larger than a predetermined admissible error, a new second adaptive base including $X_2()$ and $Y_2()$ are allocated in the memory and are

initialized with random values. Next, reconstruction processing is performed using the determined variables $X_1()$ and $Y_1()$ and prepared variables $X_2()$ and $Y_2()$ and the correction processing of the newly prepared variables $X_2()$ and $Y_2()$ is repeated until the error between the original image f(m, n) and the reconstructed image f'(m, n), defined by $\{X_1(), Y_1()\}$ and {X2(), Y2()}, has converged.

If the error has converged and is larger than a predetermined admissible error, a new adaptive base is allocated in the memory and the above processing is performed repeatedly until the converged error is less than the admissible error. If the converged error calculated after the correction of variables $X_i()$ and $Y_i()$ of i-th adaptive base is prepared is less than the admissible error, the first to i-th adaptive bases, that is, array variables $\{X_1(), Y_1()\},...,\{X_i(), Y_i()\}$ are outputted as encoded data of the original image data f(m, n).

According to the Office Action, on page 8 it states that *Amano* discloses the initializing step recited in claims, particularly referring to col. 4, lines 42-48 of the *Amano* specification. As explained above, the "adaptive base" is a variable and not a function. As understood by Applicants, *Amano* is directed to interpolating data from actual data, and is not directed to encoding two-dimensional data f(m, n) including m x n elements using adaptive bases, each of which includes two one-dimensional array variables X(m) storing m data and Y(n) storing n data.

Particularly, nothing has been found in *Amano* that is believed to teach, suggest or otherwise result in “initializing”, “reconstructing”, “calculating”, “correcting”, “determining” or outputting...as encoded data” steps, as recited in Claim 16.

Accordingly, Applicants submit that Claim 16 is not anticipated by *Amano*, and respectfully request withdrawal of the rejection under 35 U.S.C. § 102(b). Independent Claim 37

includes features similar to those discussed above with respect to Claim 16. Therefore, Claim 37 is believed to be patentable for at least the same reasons as discussed above.

The other rejected claims in this application depend from one or another of the independent claims discussed above and, therefore, are submitted to be patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

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